

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Matthew J. Adiletta et al.

Confirmation No.:

Application No.:

Examiner:

Filing Date:

Group Art Unit:

Title: METHOD AND APPARATUS FOR PERFORMING QUALITY VIDEO COMPRESSION AND MOTION ESTIMATION

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

(X) under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)

( ) under 37 CFR 1.97(c) together with either a:  
( ) Statement under 37 CFR 1.97(e), or  
( ) a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)

( ) under 37 CFR 1.97 (d) together with a:  
( ) Statement under 37 CFR 1.97(e)(1) or (2), and  
( ) a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

(X) Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EV 215730372 US**

Date of Deposit 11/25/03

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By Margaret A. Norcutt

Typed Name: Margaret A. Norcutt

Respectfully submitted,

Hamilton, Brook, Smith & Reynolds, P.C.

By Mary Lou Wakimura

Mary Lou Wakimura

Attorney/Agent for Applicant(s)  
Reg. No. 31,804

Date: 11/25/03

Telephone No.: (978) 341-0036

## PATENT APPLICATION

Sheet 1 of 5

<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	<b>ATTY. DOCKET NO.</b>	<b>APPLICATION NO.</b>	<b>CONFIRMATION NO.</b>
	<b>200308070-3</b>		
	<b>APPLICANT</b> <b>Matthew J. Adiletta et al.</b>		
	<b>FILING DATE</b>	<b>GROUP</b>	

## **REFERENCE DESIGNATION**

## **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	4,541,012	09/10/85	Tescher	
	1B	4,646,148	02/24/87	Lienard et al.	
	1C	4,779,131	10/18/88	Matsumoto et al.	
	1D	4,809,350	02/28/89	Shimoni et al.	
	1E	4,868,653	09/19/89	Golin et al.	
	1F	5,122,873	06/16/92	Golin	
	1G	5,164,819	11/17/92	Music	
	1H	5,177,608	01/05/93	Ohki et al.	
	1I	5,185,819	02/09/93	Ng et al.	
	1J	5,227,878	07/13/93	Puri et al.	
	1K	5,231,484	07/27/93	Gonzales et al.	

## **FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

	1Q	"21230 Video Codec--Product Brief," publication of Digital Equipment Corporation, 1995 (4 pp.)
	1R	Adiletta, M. et al., "Architecture of a flexible real-time video encoder/decoder: The DECchip 21230," SPIE Vol. 3021, 1997 (pp. 136-148).
	1S	Liou, M., "Overview of the px64 kbit/s Video Coding Standard," Communications of the ACM: 34(4), April 1991, pp. 60-63.

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EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	2A	5,247,357	09/21/93	Israelsen	
	2B	5,263,100	11/16/93	Kim et al.	
	2C	5,265,180	11/23/93	Golin	
	2D	5,301,205	04/05/96	Tsutsui et al.	
	2E	5,365,272	11/15/94	Siracusa	
	2F	5,371,547	12/06/94	Siracusa et al.	
	2G	5,379,122	01/03/95	Eschbach	
	2H	5,404,168	04/04/95	Allen	
	2I	5,412,431	05/02/95	Vogel	
	2J	5,416,605	05/16/95	Park	
	2K	5,428,567	06/27/95	Horvath et al.	

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	2L					
	2M					
	2N					
	2O					
	2P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

	2Q	Wallace, G.K., "The JPEG Still Picture Compression Standard," Communications of the ACM: 34(4), April 1991, pp. 31-44.
	2R	LeGall, D., "MPEG:A Video Compression Standard for Multimedia Applications," Communications of the ACM: 34(4), April 1991, pp. 47-58.
	2S	Liou, M.L., "Visual Telephony as an ISDN Application," IEEE Communications Magazine, Feb. 1990, pp. 30-38.

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3A	5,440,346	08/08/95	Alattar et al.	
3B	5,448,297	09/05/95	Alattar et al.	
3C	5,453,799	09/26/95	Yang et al.	
3D	5,457,675	10/10/95	Suzuki et al.	
3E	5,461,378	10/24/95	Shimoyoshi et al.	
3F	5,483,287	01/09/96	Siracusa	
3G	5,491,519	02/13/96	Kim	
3H	5,510,840	04/23/96	Yonemitsu et al.	
3I	5,544,239	08/06/96	Golin et al.	
3J	5,557,330	09/17/95	Astle	
3K	5,559,557	09/24/96	Kato	

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	3L					
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	3N					
	3O					
	3P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

	3Q	"Line Transmission of Non-Telephone Signals," ITU-T standard, pp. 1-25.
	3R	
	3S	

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	4A	5,574,504	11/12/96	Yagasaki et al.	
	4B	5,625,759	04/29/97	Freeman	
	4C	5,640,208	06/17/97	Fujinami	
	4D	5,657,086	08/12/97	Tahara et al.	
	4E	5,724,098	03/03/98	Murakami et al.	
	4F	5,724,346	04/21/98	Sievers et al.	
	4G	5,384,598	01/24/95	Rodriguez et al.	
	4H	5,684,534	11/04/97	Harney et al.	
	4I	6,252,991	06/26/01	Uchio et al.	
	4J	5,838,834	11/17/98	Saito	
	4K	5,208,673	05/04/93	Boyce	

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EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
5A	5,731,850	03/24/98	Maturi et al.	
5B	5,615,287	03/25/97	Fu et al.	
5C				
5D				
5E				
5F				
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5H				
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